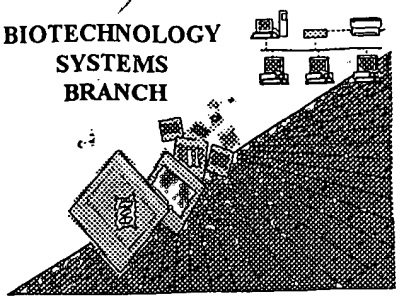
BIOTECHNOLOGY
SYSTEMS
BRANCH



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/084,691A

Source: OIPE

Date Processed by STIC: 6/25/2001

RECEIVED
JUL 27 2001
TECH CENTER 1600/2900

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.
Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

http://www.uspto.gov/web/offices/pac/checker

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 09/084,691A

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1	Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2	Invalid Line Length	The rules require that a line not exceed 72 characters in length. This includes white spaces.
3	Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
4	Non-ASCII	The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
5	Variable Length	Sequence(s)____contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6	PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
7	Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
8	Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence. <210> sequence id number <400> sequence id number 000
9	Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
10	Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
11	Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12	PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

OIPE

RAW SEQUENCE LISTING DATE: 06/25/2001
PATENT APPLICATION: US/09/084,691A TIME: 11:43:36

pp 1-4

Input Set : A:\Nih1.app
Output Set: N:\CRF3\06252001\I084691A.raw

Does Not Comply
Corrected Diskette Needed

```
  3 <110> APPLICANT: Bukh, J.
  4       Miller, R.H.
  5       Purcell, R.H.
  7 <120> TITLE OF INVENTION: Nucleotide and Deduced Amino Acid Sequences of the
  8       Envelope 1 and Core Genes of Isolates of Hepatitis C
  9       Virus and the use of Reagents Derived From These
 10       Sequences in Diagnostic Methods and Vaccines
 12 <130> FILE REFERENCE: 20264116US2
 14 <140> CURRENT APPLICATION NUMBER: 09/084,691A
 15 <141> CURRENT FILING DATE: 1998-05-26
 17 <150> PRIOR APPLICATION NUMBER: 08/290,665
 18 <151> PRIOR FILING DATE: 1994-08-15
 20 <150> PRIOR APPLICATION NUMBER: 08/086,428
 21 <151> PRIOR FILING DATE: 1993-06-29
 23 <160> NUMBER OF SEQ ID NOS: 274
 25 <170> SOFTWARE: PatentIn Ver. 2.1
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ERRORED SEQUENCES

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7373 <210> SEQ ID NO: 240
7374 <211> LENGTH: 33
7375 <212> TYPE: PRT
7376 <213> ORGANISM: Homo sapiens
7378 <400> SEQUENCE: 240
7379 Trp Ile Gln Val Thr Pro Asn Val Ala Val Lys His Arg Gly Ala Leu
7380   1               5                  10                  15
E--> 7382 Thr His Asn Leu Arg Xaa His Xaa Asp Xaa Ile Val Met Ala Ala Thr
7383              20                  25                  30
7385 Val
```

see item 9 on Error Summary Sheet

```
7405 <210> SEQ ID NO: 242
7406 <211> LENGTH: 33
7407 <212> TYPE: PRT
7408 <213> ORGANISM: Homo sapiens
7410 <400> SEQUENCE: 242
E--> 7411 Trp Ile Pro Val Xaa Pro Asn Val Ala Val Xaa Xaa Pro Gly Ala Leu
7412   1               5                  10                  15
7414 Thr Gln Gly Leu Arg Thr His Ile Asp Met Val Val Met Ser Ala Thr
7415              20                  25                  30
7417 Leu
```

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```
7421 <210> SEQ ID NO: 243
7422 <211> LENGTH: 33
7423 <212> TYPE: PRT
7424 <213> ORGANISM: Homo sapiens
7426 <400> SEQUENCE: 243
E--> 7427 Trp Thr Xaa Val Thr Pro Thr Val Ala Val Arg Tyr Val Gly Ala Thr
7428   1               5                  10                  15
```

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Input Set : A:\Nih1.app
Output Set: N:\CRF3\06252001\I084691A.raw

7430 Thr Ala Ser Ile Arg Ser His Val Asp Leu Leu Val Gly Ala Ala Thr
7431 20 25 30
E--> 7433 Xaa
7437 <210> SEQ ID NO: 244
7438 <211> LENGTH: 33
7439 <212> TYPE: PRT
7440 <213> ORGANISM: Homo sapiens
7442 <400> SEQUENCE: 244
E--> 7443 Trp Val Ala Leu Xaa Pro Thr Leu Ala Ala Arg Asn Xaa Xaa Xaa Xaa
7444 1 5 10 15
E--> 7446 Thr Xaa Xaa Ile Arg Xaa His Val Asp Leu Leu Val Gly Ala Ala Xaa
7447 20 25 30
7449 Phe
7453 <210> SEQ ID NO: 245
7454 <211> LENGTH: 33
7455 <212> TYPE: PRT
7456 <213> ORGANISM: Homo sapiens
7458 <400> SEQUENCE: 245
E--> 7459 Trp Val Xaa Xaa Xaa Pro Thr Val Ala Thr Arg Asp Gly Lys Leu Pro
7460 1 5 10 15
E--> 7462 Xaa Xaa Gln Leu Arg Arg Xaa Ile Asp Leu Leu Val Gly Ser Ala Thr
7463 20 25 30
7465 Leu
7485 <210> SEQ ID NO: 247
7486 <211> LENGTH: 33
7487 <212> TYPE: PRT
7488 <213> ORGANISM: Homo sapiens
7490 <400> SEQUENCE: 247
E--> 7491 Trp Val Ala Leu Thr Pro Thr Val Ala Xaa Xaa Tyr Ile Gly Ala Pro
7492 1 5 10 15
E--> 7494 Leu Xaa Ser Xaa Arg Arg His Val Asp Leu Met Val Gly Ala Ala Thr
7495 20 25 30
7497 Val
7533 <210> SEQ ID NO: 250
7534 <211> LENGTH: 33
7535 <212> TYPE: PRT
7536 <213> ORGANISM: Homo sapiens
7538 <400> SEQUENCE: 250
E--> 7539 Trp Val Xaa Ile Thr Pro Thr Leu Ser Ala Pro Xaa Xaa Gly Ala Val
7540 1 5 10 15
E--> 7542 Thr Ala Pro Leu Arg Arg Xaa Val Asp Tyr Leu Ala Gly Gly Ala Ala
7543 20 25 30
7545 Leu
7565 <210> SEQ ID NO: 252
7566 <211> LENGTH: 23
7567 <212> TYPE: PRT
7568 <213> ORGANISM: Homo sapiens
7570 <400> SEQUENCE: 252
E--> 7571 Thr Leu Thr Met Ile Leu Ala Tyr Ala Ala Arg Val Pro Glu Leu Xaa

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item 9

item 9

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Input Set : A:\Nih1.app
Output Set: N:\CRF3\06252001\I084691A.raw

7572 1 5 10 15
E--> 7574 Leu Xaa Val Val Phe Gly Gly
7575 20
7591 <210> SEQ ID NO: 254
7592 <211> LENGTH: 23
7593 <212> TYPE: PRT
7594 <213> ORGANISM: Homo sapiens
7596 <400> SEQUENCE: 254
E--> 7597 Thr Xaa Thr Xaa Ile Leu Ala Tyr Xaa Met Arg Val Pro Glu Val Ile
7598 1 5 10 15
E--> 7600 Xaa Asp Ile Xaa Xaa Gly Ala
7601 20
7604 <210> SEQ ID NO: 255
7605 <211> LENGTH: 23
7606 <212> TYPE: PRT
7607 <213> ORGANISM: Homo sapiens
7609 <400> SEQUENCE: 255
E--> 7610 Ala Val Gly Met Val Val Ala His Xaa Leu Arg Leu Pro Gln Thr Xaa
7611 1 5 10 15
E--> 7613 Phe Asp Ile Xaa Ala Gly Ala
7614 20
7617 <210> SEQ ID NO: 256
7618 <211> LENGTH: 23
7619 <212> TYPE: PRT
7620 <213> ORGANISM: Homo sapiens
7622 <400> SEQUENCE: 256
E--> 7623 Thr Xaa Ala Leu Val Xaa Ser Gln Leu Leu Arg Xaa Pro Gln Ala Xaa
7624 1 5 10 15
E--> 7626 Xaa Asp Xaa Val Xaa Gly Ala
7627 20
7630 <210> SEQ ID NO: 257
7631 <211> LENGTH: 23
7632 <212> TYPE: PRT
7633 <213> ORGANISM: Homo sapiens
7635 <400> SEQUENCE: 257
E--> 7636 Thr Xaa Ala Leu Val Xaa Ala Gln Leu Leu Arg Xaa Pro Gln Ala Xaa
7637 1 5 10 15
7639 Leu Asp Met Ile Ala Gly Ala
7640 20
7656 <210> SEQ ID NO: 259
7657 <211> LENGTH: 23
7658 <212> TYPE: PRT
7659 <213> ORGANISM: Homo sapiens
7661 <400> SEQUENCE: 259
E--> 7662 Thr Thr Thr Leu Xaa Leu Ala Gln Val Met Arg Ile Pro Ser Thr Leu
7663 1 5 10 15
E--> 7665 Val Asp Leu Leu Xaa Gly Gly
7666 20
7695 <210> SEQ ID NO: 262

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Input Set : A:\Nih1.app
Output Set: N:\CRF3\06252001\I084691A.raw

7696 <211> LENGTH: 23
7697 <212> TYPE: PRT
7698 <213> ORGANISM: Homo sapiens
7700 <400> SEQUENCE: 262
E--> 7701 Xaa Thr Ala Leu Xaa Met Ala Gln Xaa Leu Arg Ile Pro Gln Val Val
7702 1 5 10 15
E--> 7704 Ile Asp Ile Ile Ala Gly Xaa
7705 20

Item 9

FYI

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY DATE: 06/25/2001
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Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

L:7382 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:240
L:7411 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:242
L:7427 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:243
M:340 Repeated in SeqNo=243
L:7443 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:244
M:340 Repeated in SeqNo=244
L:7459 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:245
M:340 Repeated in SeqNo=245
L:7491 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:247
M:340 Repeated in SeqNo=247
L:7539 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:250
M:340 Repeated in SeqNo=250
L:7571 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:252
M:340 Repeated in SeqNo=252
L:7597 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:254
M:340 Repeated in SeqNo=254
L:7610 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:255
M:340 Repeated in SeqNo=255
L:7623 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:256
M:340 Repeated in SeqNo=256
L:7636 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:257
L:7662 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:259
M:340 Repeated in SeqNo=259
L:7701 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:262
M:340 Repeated in SeqNo=262
L:7741 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:264
L:7870 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7882 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7885 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7888 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7894 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7897 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7900 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:7903 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265
L:8013 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8022 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8025 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8028 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8031 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8037 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8043 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8046 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266
L:8111 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8117 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8123 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8135 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267

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Input Set : **A:\Nih1.app**
Output Set: **N:\CRF3\06252001\I084691A.raw**

L:8144 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:267
L:8200 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8203 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8206 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8212 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8215 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8227 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:268
L:8362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8371 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8374 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8377 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8380 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8383 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8392 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:269
L:8418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:270
L:8448 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:270
L:8529 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8532 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8535 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8541 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8547 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8550 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8553 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271
L:8556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:271